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08/765,046 11/15/96 TABATA

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EXAMINER

VANDY, T

ART UNIT

PAPER NUMBER

1754

DATE MAILED:

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

08-765,046

Applicant(s)

TABATA et al.

Examiner

VANDY

Group Art Unit

1754

☒ Responsive to communication(s) filed on 19 NOV. 1999.

☒ This action is FINAL.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire THREE month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 2-5, 7, 8, 10-12 AND 15-22 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☒ Claim(s) 7, 8, 11 AND 22 is/are allowed.

☒ Claim(s) 2-5, 10, 12 AND 15-21 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

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DETAILED ACTION

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 C.F.R. 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 C.F.R. 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 C.F.R. 3.73(b).

Claims 10, 12 and 16-21 are again rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-11 of U.S. Patent No. 5,869,013. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of 08-765,046 and U. S. Pat. No. 5,869,013 disclose obvious variations of the same method for removing nitrogen oxides out of exhaust gases by contacting the nitrogen oxide contaminated exhaust gas and hydrocarbon reducing agents with a beta aluminosilicate impregnated with cobalt having overlapping silica to alumina ratios (compare the silica to alumina ratio of 5 to 250 reported in claim 1 in U. S. Pat. 5,869,013 to the silica to alumina ratio of 20 to 800 set forth in claim 18 in 08-765,046) and overlapping cobalt to aluminum ratios (compare the cobalt to aluminum ratio of lower than 0.5 reported in claim 1 in U.

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S. Pat. No. 5,869,013 to the cobalt to aluminum ratio of 0.2 to 0.6 reported in claim 18 in 08-765,046).

The difference between the claims of 08-765,046 and U. S. Pat. No. 5,869,013 is that claim 1 in U. S. Pat. No. 5,869,013 discloses the pressure and gas hourly space velocity of the gas being treated, however it is submitted that this difference would have been obvious to one of ordinary skill in the art at the time the invention was made because it is expected to be well within the skill level of the person having ordinary skill in this art to determine what the optimum process parameters are (namely, the gas pressure, gas hourly space velocity, etc. . . reported in claim 1 in U. S. Pat. No. 5,869,013) within the general conditions of the prior art, consistent with the decisions reached in *In re Aller* et al. 105 U.S.P.Q. 233; *In re Reni* 164 U.S.P.Q. 245 and *In re Boesch* 205 U.S.P.Q. 215 and 219.

The Applicants comment that the rejection of claims 10-12 and 16-21 for obviousness-type double patenting over U. S. Pat. No. 5,869,013 is rendered moot by the Terminal Disclaimer.

The Terminal Disclaimer submitted at the end of the Applicants' amendment dated 17 Nov. 1999 is not acceptable because it has not been submitted as a separate, distinct document, as required in 37 C.F.R. 1.4(c).

Claims 2-5, 10, 12 and 15-21 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-9 of U.S. Patent No.

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5,985,225. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of 08-765,046 and U. S. Pat. 5,985,225 disclose obvious variations of the same catalyst and the same method of using the catalyst to remove nitrogen oxides out of exhaust gas.

The difference between the Applicants' claims and U. S. Pat. No. 5,985,225 is that the claims of U. S. Pat. 5,985,225 disclose that the catalyst composition exhibits a Raman spectrum of the cobalt loaded zeolite that has a ratio of intensity of the 689 cm^{-1} band to the zeolite framework bands of between 300 and 600 cm^{-1} that is less than 0.07 .

Claim 5 in U. S. Pat. 5,985,225 sets forth that the zeolite is a BEA (i. e. beta) zeolite. Claim 4 in 08-765,046 sets forth that the aluminosilicate is of the BEA structure.

Therefore, this difference (i. e. the recitation that the catalyst composition exhibits a Raman spectrum of the cobalt loaded zeolite that has a ratio of intensity of the 689 cm^{-1} band to the zeolite framework bands of between 300 and 600 cm^{-1} that is less than 0.07) would have been obvious to one of ordinary skill in the art at the time the invention was made because a comparison of claim 4 in 08-765,046 and claim 5 in U. S. Pat. 5,985,225 makes it obvious that the same catalyst is being claimed. The same catalyst would inherently exhibit the same Raman spectrum characteristics.

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Claims 19 and 21 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The added material which is not supported by the original disclosure is as follows: the limitations set forth in applicants' claims 19 and 21 "wherein said 90% or more of the hydrocarbons contained in the exhaust gas are saturated hydrocarbons".

The applicants' comment set forth at the top of pg. 2 in the amendment mailed 27 April 1999 that support for claim 19 can be found in Examples 5 and 9 are noted, however neither Examples 5 or 9 provide 35 U.S.C. 112, first paragraph support for the limitations of either claims 19 or 21.

The Applicants argue that since Examples 5 and 9 in the Applicants' specification use propane, then the group of hydrocarbons having four or fewer carbons is well known and the Examples are more than adequate to show that the present Inventors were in possession of the invention of claims 19 and 21.

The rejection is maintained because the scope of Applicants' claims 19 and 21 embrace the use of (for example) ethane and butane, which is not supported by the specification.

Claim Rejections - 35 USC § 102

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The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 3, 4, 15, 16 and 17 are again rejected under 35 U.S.C. 102(b) as being anticipated by Japan patent document no. 5-220,403 A.

The English abstract of the Japan patent document no. 5-220,403 A discloses both a catalyst and method for removing nitrogen oxides out of an oxygen-rich exhaust gas by contacting the nitrogen oxides contaminated exhaust gas with a beta zeolite that may be loaded with cobalt, as set forth in applicants' claims 15 and 16 as well as applicants' claims 3 and 4. From the disclosure set forth on pg. 3, col. 4 paragraph no. [0027] in the text of Japan patent document no. 5-220,403 A it appears that C_3H_6 is the hydrocarbon that acts as a reducing agent for the nitrogen oxides, in a manner that fairly anticipates the use of hydrocarbons having two or larger number of carbons for reducing the NO_x as set forth in applicants' claim 16 (particularly since pg. 13 lines 14-16 in the applicants' specification sets forth that the hydrocarbons used in the present invention refer to a wide variety of hydrocarbons, including olefins).

The limitations set forth in applicants' claims 15 and 16 calling for the metallocsilicate to have a plurality of straight channels of oxygen 8-ring or larger in section, said plurality of straight channels being oriented in at least two different dimensional directions, individual members of said plurality of straight channels communicating with each other via micropores having a size of

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oxygen 8-ring or larger, the straight channels oriented in at least one of said at least two different dimensional directions having a size in section of oxygen 10-ring or larger are noted, but no material distinction is seen in as much as the catalyst that the applicants use appears to be the same cobalt containing beta zeolite described in the English abstract of the Japan patent document no. 5-220,403 A (please compare the cobalt containing beta zeolite described in Examples 1, 2 and 4 in the applicants' specification to the cobalt containing beta zeolite taught in the English abstract of the Japan patent document no. 5-220,403 A as well as the disclosure set forth on pg. 6 lines 6-9 in the applicants' specification teaching that the applicants' most preferred form is BEA (i. e. beta) which has straight channels of oxygen 12-ring section in two different dimensional directions, the channels communicating with each other via 12-ring micropores).

Additionally, note that paragraph [0027] on pg. 3 in the Japan patent document no. 5-220,403 A discloses that the exhaust gas contains C_3H_6 (but does not mention the presence of any other hydrocarbons), thus, in the process of Japan patent document no. 5-220,403, 90 percent or more of the hydrocarbons contained in the exhaust gas are hydrocarbons having four or fewer carbons, as set forth in applicants' claim 17.

Note that the same exhaust gas is expected to inherently contain the same sulfur oxides (and water) recited in claims 15 and 16.

Claims 3, 15 and 16 are again rejected under 35 U.S.C. 102(b) as being anticipated by U. K. patent application 2 238 784 A to Tamura et al.

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The Tamura et al. application discloses both a catalyst and a process for removing nitrogen oxides out of an exhaust gas containing excess oxygen (please see pg. 2 lines 14-17 in this Tamura et al. application) by contacting the nitrogen oxides contaminated exhaust gas with a zeolite that may be of the ferrierite type that carries cobalt (please see Table 2 on pg. 10, particularly the cobalt "Metallic element supported" and "Kind of carrier" B (the ferrierite) in this Tamura et al. application), wherein the contact between the nitrogen oxide contaminated exhaust gas and the Co/zeolite is conducted in the presence of organic compounds (such as methane, ethane, propane, etc...) which act as reducing agents for the nitrogen oxides (please see the paragraph bridging pages 4 and 5 in this Tamura et al. application), as set forth in applicants' claims 3, 15 and 16.

The limitations set forth in applicants' claims 15 and 16 calling for the metallosilicate to have a plurality of straight channels of oxygen 8-ring or larger in section, said plurality of straight channels being oriented in at least two different dimensional directions, individual members of said plurality of straight channels communicating with each other via micropores having a size of oxygen 8-ring or larger, the straight channels oriented in at least one of said at least two different dimensional directions having a size in section of oxygen 10-ring or larger are noted, but no material distinction is seen in as much as the catalyst that the applicants use appears to be the same cobalt containing ferrierite zeolite described Table 2 on pg. 10 in the Tamura et al. application (please compare the cobalt containing ferrierite zeolite described in the second full paragraph on pg. 4 and the paragraph bridging pages 5 and 6 in the applicants' specification (note

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that "FER" refers to ferrierite) to the cobalt containing ferrierite zeolite taught in Table 2 on pg. 10 in the Tamura et al. application).

Note that the same exhaust gas is expected to inherently contain the same sulfur oxides (and water) recited in claims 15 and 16.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 148 USPQ 459, that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or unobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 C.F.R. 1.56 to point out the inventor

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and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

The person having "ordinary skill in the art" has the capability of understanding the scientific and engineering principles applicable to the claimed invention. The references of record in this application reasonably reflect this level of skill.

Claims 2-5, 10 and 15-17 are again rejected under 35 U.S.C. 103(a) as being unpatentable over Japan patent document no. 5-220,403 A.

The English abstract of the Japan patent document no. 5-220,403 A discloses both a catalyst and method for removing nitrogen oxides out of an oxygen-rich exhaust gas by contacting the nitrogen oxides contaminated exhaust gas with a beta zeolite that may be loaded with cobalt, as set forth in applicants' claims 15 and 16 as well as applicants' claims 3, 4 and 10. From the disclosure set forth on pg. 3, col. 4 paragraph no. [0027] in Japan patent document no. 5-220,403 A it appears that C_3H_6 is the hydrocarbon that acts as a reducing agent for the nitrogen oxides, in a manner that fairly anticipates the use of hydrocarbons having two or larger number of carbons for reducing the NO_x as set forth in applicants' claim 16 (particularly since pg. 13 lines 14-16 in the applicants' specification sets forth that the hydrocarbons used in the present invention refer to a wide variety of hydrocarbons, including olefins).

The limitations set forth in applicants' claims 15 and 16 calling for the metallosilicate to have a plurality of straight channels of oxygen 8-ring or larger in section, said plurality of straight

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channels being oriented in at least two different dimensional directions, individual members of said plurality of straight channels communicating with each other via micropores having a size of oxygen 8-ring or larger, the straight channels oriented in at least one of said at least two different dimensional directions having a size in section of oxygen 10-ring or larger are noted, but no material distinction is seen in as much as the catalyst that the applicants use appears to be the same cobalt containing beta zeolite described in the English abstract of the Japan patent document no. 5-220,403 A (please compare the cobalt containing beta zeolite described in Examples 1, 2 and 4 in the applicants' specification to the cobalt containing beta zeolite taught in the English abstract of the Japan patent document no. 5-220,403 A as well as note the disclosure set forth on pg. 6 lines 6-9 in the applicants' specification teaching that the applicants' most preferred form is BEA (i. e. beta) which has straight channels of oxygen 12-ring section in two different dimensional directions, the channels communicating with each other via 12-ring micropores).

Additionally, note that paragraph [0027] on pg. 3 in the Japan patent document no. 5-220,403 A discloses that the exhaust gas contains C_3H_6 (but does not mention the presence of any other hydrocarbons), thus, in the process of Japan patent document no. 5-220,403 A, 90 percent or more of the hydrocarbons contained in the exhaust gas are hydrocarbons having four or fewer carbons, as set forth in applicants' claim 17.

The difference between the applicants' claims and this Japan patent document no. 5-220,403 A is that applicants' claim 2 calls for the metallosilicate to have an average diameter for the primary particles of 0.01 and 0.2 micrometers whereas Japan patent document no. 5-220,403

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A does not appear to expressly describe the particle size of the primary particles, however it is submitted that this difference would have been obvious to one of ordinary skill in the art at the time the invention was made because it is expected to be within the skill level of the person having ordinary skill in the art to readily determine the size of the particles and there is no evidence of record establishing that the size of the primary particles of the applicants' catalyst and the catalyst of the Japan patent document no. 5-220,403 A do, in fact, differ.

Note that the bottom portion of paragraph [0024] in the Japan patent document no. 5-220,403 A discloses a Si/Al ratio of 20 in a manner that is not seen to distinguish from the Si/Al ratios recited in applicants' claims 5 and 10.

The difference between the applicants' claims and the Japan patent document no. 5-220,403 A is that applicants' claims 5 and 10 set forth a Co/Al ratio of 0.2 to 0.6 whereas Japan patent document no. 5-220,403 A does not appear to expressly recite what the Co (or other catalytic metals)/Al ratio is, however it is submitted that this difference would have been obvious to one of ordinary skill in the art at the time the invention was made because it is expected to be within the skill level of the person having ordinary skill in the art to readily determine the Co/Al ratio in the catalyst of Japan patent document no. 5-220,403 A and there is no evidence of record establishing that the Co/Al ratio of the applicants' catalyst and the catalyst of the Japan patent document no. 5-220,403 A do, in fact, differ.

Note that the same exhaust gas is expected to inherently contain the same sulfur oxides (and water) recited in claims 15 and 16.

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Claims 3, 15, 16 and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over U. K. patent application 2 238 784 A to Tamura et al.

The Tamura et al. application discloses both a catalyst and a process for removing nitrogen oxides out of an exhaust gas containing excess oxygen (please see pg. 2 lines 14-17 in this Tamura et al. application) by contacting the nitrogen oxides contaminated exhaust gas with a zeolite that may be of the ferrierite type that carries cobalt (please see Table 2 on pg. 10, particularly the cobalt "Metallic element supported" and "Kind of carrier" B (the ferrierite) in this Tamura et al. application), wherein the contact between the nitrogen oxide contaminated exhaust gas and the Co/zeolite is conducted in the presence of organic compounds (such as methane, ethane, propane, etc...) which act as reducing agents for the nitrogen oxides (please see the paragraph bridging pages 4 and 5 in this Tamura et al. application), as set forth in applicants' claims 3, 15 and 16.

The limitations set forth in applicants' claims 15 and 16 calling for the metallosilicate to have a plurality of straight channels of oxygen 8-ring or larger in section, said plurality of straight channels being oriented in at least two different dimensional directions, individual members of said plurality of straight channels communicating with each other via micropores having a size of oxygen 8-ring or larger, the straight channels oriented in at least one of said at least two different dimensional directions having a size in section of oxygen 10-ring or larger are noted, but no material distinction is seen in as much as the catalyst that the applicants use appears to be the same cobalt containing ferrierite zeolite described Table 2 on pg. 10 in the Tamura et al.

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application (please compare the cobalt containing ferrierite zeolite described in the second full paragraph on pg. 4 and the paragraph bridging pages 5 and 6 in the applicants' specification (note that "FER" refers to ferrierite) to the cobalt containing ferrierite zeolite taught in Table 2 on pg. 10 in the Tamura et al. application).

The difference between the applicants' claims and this Tamura et al. application is that applicants' claims 15 and 16 call for the metallosilicate to have a plurality of straight channels of oxygen 8-ring or larger in section, said plurality of straight channels being oriented in at least two different dimensional directions, etc..., however it is submitted that this difference would have been obvious to one of ordinary skill in the art at the time the invention was made because a review of the applicants' specification on pages 4-6 and Table 2 on pg. 10 in the Tamura et al. application reveals that both the applicants' and Tamura et al. are using the same catalyst. Therefore, the descriptive limitations set forth in applicants' claims 15 and 16 are not seen to impart a material difference between the catalysts.

The limitations of applicants' claims 19-21 are noted, but are submitted to be obvious from the paragraph bridging pages 4 and 5 in UK 2,238,784 A where it is disclosed that hydrocarbons such as methane, ethane, etc. . . can be used as reducing agents (for removing NO_x out of diesel or gas engine exhaust gas: please see pg. 1, first full paragraph in UK 2,238,784 A).

Note that the same exhaust gas is expected to inherently contain the same sulfur oxides (and water) recited in claims 15 and 16.

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Claims 7, 8, 11 and 22 have not been rejected under either 35 U.S.C. 102 or 35 U.S.C. 103 because there is no suggestion or teaching in the references of record to modify the zeolite catalysts of either Japan patent document no. 5-220,403 A or U. K. patent application no. 2 238 784 A to include either or both of the boron and titanium set forth in applicants' claims 7, 8, 11 and 22.

Response to Amendment

The amendments mailed 27 April 1999 as paper no. 16 and mailed 27 May 1999 as paper no. 20 are objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: the limitations set forth in applicants' claims 19 and 21 "wherein said 90% or more of the hydrocarbons contained in the exhaust gas are saturated hydrocarbons".

The applicants' comment set forth at the top of pg. 2 in the amendment mailed 27 April 1999 that support for claim 19 can be found in Examples 5 and 9 are noted, however neither Examples 5 or 9 provide 35 U.S.C. 112, first paragraph support for the limitations of either claims 19 or 21.

Applicant is required to cancel the new matter in the reply to this Office action.

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Response to Arguments

Applicants' arguments filed 17 November 1999 as paper no. 23 have been fully considered but they are not persuasive.

a) *The Applicants argue that JP 5-220,403 suggests a variety could be used with zeolite with copper being preferred in the examples. Applicants' claim 15 is directed to a cobalt containing catalyst, which exhibits durable performance in even in the presence of water vapor.*

The same cobalt on zeolite catalyst that one of ordinary skill in the art would immediately envision from the disclosure of the English abstract of JP 5-220,403 A would inherently exhibit the same performance.

b) *The Applicants argue that even if the JP 5-220,403 A reference can be considered generic to the present invention, this alone does not constitute anticipation in the absence of some teaching leading one of ordinary skill in the art to the claimed species: In re Kalm 154 USPQ 10.*

The statement set forth in capitalized, bold print on pg. 2100-64 in the MPEP (July 1998) "A REFERENCE THAT CLEARLY NAMES THE CLAIMED SPECIES ANTICIPATES THE CLAIM NO MATTER HOW MANY OTHER SPECIES ARE NAMED" (please also note *Ex Parte A, 17 USPQ2d 1716*) makes it clear that the recitation of "cobalt" as one of the five catalytic metal species in the English abstract of JP 5-220,403 A clearly anticipates at least Applicants' claim 15, in as much as Applicants' claim 15 expressly recites the same "cobalt".

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Additionally, note the discussion of *In re Petering* 301 F.2d 676, 681, 133 USPQ 275, 280 set forth on pg. 2100-127 in the MPEP (July 1998) where it was set forth that a prior art genus containing only 20 species inherently anticipated a claimed species because “one skilled in (the) art would envision each member” of the genus.

c) *The Applicants argue that their claim 16 requires that the exhaust gas contains sulfur oxides. Nothing in the reference discloses or suggests that the catalyst can be used successfully to treat such an exhaust gas.*

The urged difference is only descriptive and linguistic, rather than material in as much as the same automobile exhaust gas will inherently contain the same components (to include sulfur oxides). Further, the urged results are not surprising since there is nothing in JP 5-220,403 teaching or suggesting that their catalyst would be deactivated by the sulfur oxides in the exhaust gas.

d) *The Applicants argue that the ferrite material used in UK 2,238,784 A include straight channels oriented in two different dimensional directions, but the sizes of the straight channels are 8-ring and 10-ring, however claims 15 and 16 require “said crystalline metallosilicate having a plurality of straight channels of oxygen 10-ring or larger in section, said plurality of straight channels being oriented in at least two different dimensional directions”.*

The argument conveniently ignores that the Applicants are claiming the same catalyst set forth in UK 2,238,784 A: please compare the cobalt containing ferrierite zeolite described in the second full paragraph on pg. 4 and the paragraph bridging pages 5 and 6 in the Applicants’

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specification (note that "FER" refers to ferrierite) to the cobalt containing ferrierite zeolite taught in Table 2 on pg. 10 in the Tamura et al. application.

Differences in description, per se, of the same catalyst does not make for a patentably and materially distinct catalyst.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

The following reference is made of record:

U. S. Pat. No. 5,993,764 disclosing the use of a cobalt loaded Beta zeolite catalyst (which is also loaded with additional metals) for removing nitrogen oxides out of exhaust gas.

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Any inquiry concerning this communication should be directed to Timothy C. Vanoy at telephone number (703) 308- 2540.

for

Timothy Vanoy/tv

04 January 2000

Steven P. Griffin
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